Red River Basin Commission

Vision

A Red River Basin where residents, organizations, and governments work together to achieve basin-wide commitment to comprehensive integrated watershed stewardship and management.

Mission

To create a comprehensive integrated basin-wide vision, to build consensus and commitment to the vision, and to speak with a unified voice for the Red River Basin.



Red River of the North Basin



Three States...
One Province...
Two Countries...
ONE Red River Basin

- •Water Law Differences
- Basin Decision Tools
- •LiDAR HMS HEC RAS
- •Flow reduction goals
- •IJC IRRB RRBC



Overview Presentation

- Organizations (Local Level: MN, ND, MB)
- 2. Funding
 - Link to State/Provincial/Federal
- 3. Planning
- 4. Projects

Organization - Local Structures

- Minnesota
- North Dakota
 - RRRA
- Manitoba



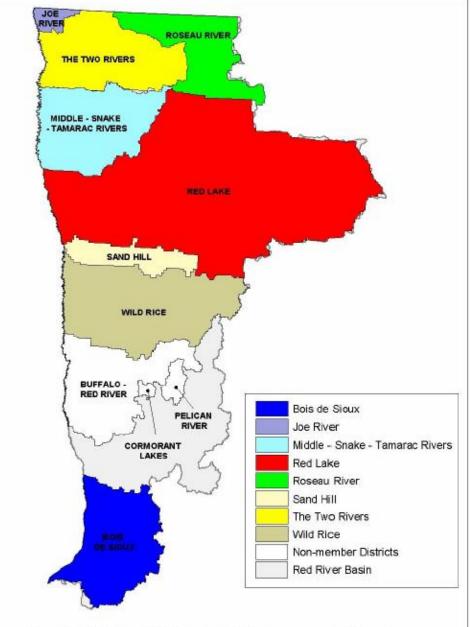
Minnesota Watershed Districts

Watershed Districts are special purpose local units of government with boundaries based on the natural **hydrologic boundaries** of a watershed.

Watershed Districts are governed by a board of managers. Members of the board are **appointed by county commissioners** within the District's boundaries.

Non-Member Districts: Buffalo Red River Watershed District Lower Ottertail – recently part of the BRRWD

Upper Ottertail – not organized



The Red River Watershed Management Board and its Member Watershed Districts

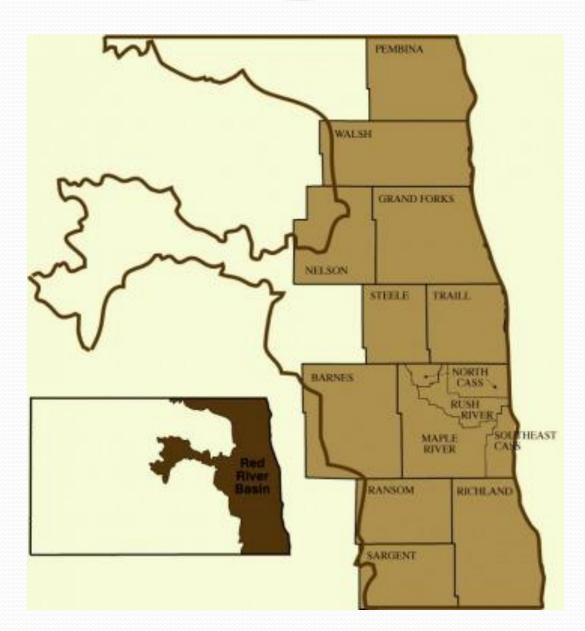
North Dakota Water Resource Districts

The majority of water resource districts in North Dakota are established along **county boundaries.** Because water does not respect political boundaries, cooperation is sometimes required among many water resource districts to manage water at the watershed level.

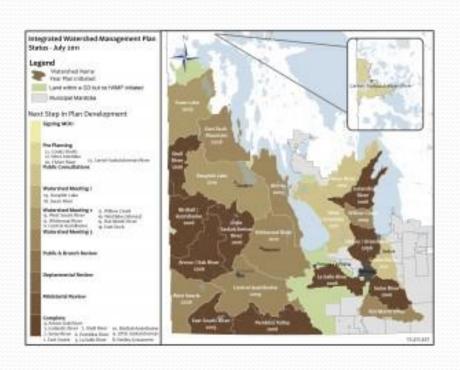
The RRJWRD was the first joint district to be created in North Dakota. It was originally formed in 1979 to address flooding problems in the Red River Valley.

Members appointed by County Commissioners.

There are **currently 14 individual water resource districts** (see map) that make up the RRJWRD.



Manitoba Conservation Districts



- Members elected from local Municipalities.
- By Rural Municipal boundaries
- Moving toward watershed boundaries.
- All part of MB CD Association

MN RRWMB Funding

- MN RRWMB can assess 2 mills
 - 1 mill to the RRWMB for projects based on star value system
 - 1 mill back to the local watershed district for projects
 - WDs can assess additional mills for admin, data,etc.
- Assessments districts/ benefit areas project specific
 - Project construction and maintenance
- Typical project cost share ½ state, ¼ joint, ¼ local

MN Funding Sources

- MN DNR
 - Cost sharing
- MN PCA
 - 319 Grants
- MN BWSR Board of Water & Soil Resources
 - Clean Water Legacy Grants
- LCCMR Legislative-Citizen Commission on Minnesota Resources Grants
- Lessard Sams Outdoor Heritage Fund Grants
- Bonding Bills

ND Funding Sources

- Mill Levy for NDJWRD 2 mills
- Local WRDs up to 4 mills with county approval
- Assessment districts/benefit areas
 - Project costs/maintenance
- ND SWC cost sharing for projects varies
 - 50% and up
 - Typical project cost share ½ state, ¼ joint, ¼ local
- ND Dept. of Health 319 program
- ND Game & Fish
- Federal

MB Funding

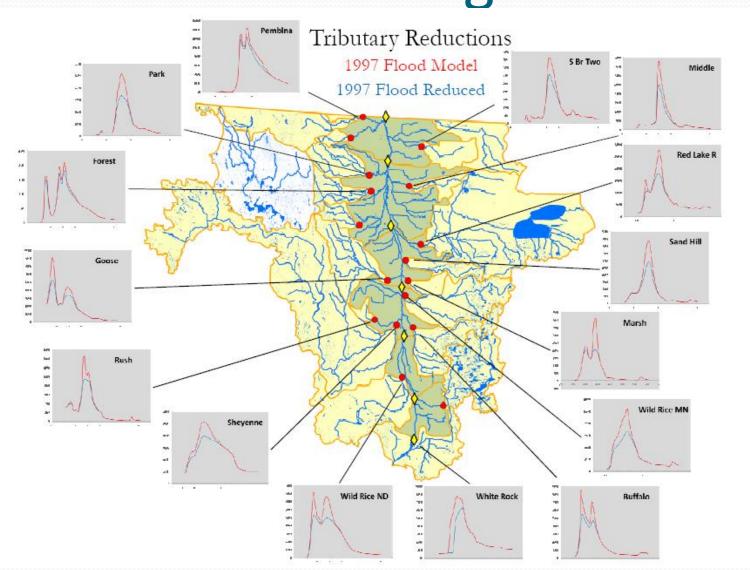
- Member Rural Municipalities: Administration
- Project & General Operating
 - Annual Request to Province
 - Provincial pool of funds set annually
- Grants from multiple other sources
 - Local fundraisers
 - Federal grants
 - Business
 - Foundations

Link to Provincial/State/Federal Government

- Funding
 - C/S Varies by Project
 - L/S/P/ usually no Federal
 - Grants
 - Bonding Bills
 - Transfer Payments
 - Federal Programs

- Permitting
 - Surface Drainage
 - Tile Drainage
 - Surface Water Use
 - Ground Water Use
 - Detention/Retention
 - Wetlands
 - Diversions
 - (Projects)

Planning



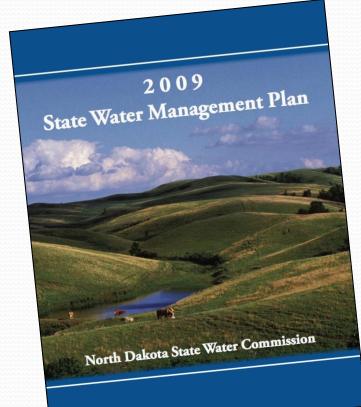
MN Planning

- County Plans (CLWP)
 - BWSR
 - Been around since 1980's
 - RR MN JPB
- Watershed District Plans
 - Updated every 10 years
 - Include new hydrologic data (LiDAR, HMS Models)
- New Legislation: incorporate into 1 watershed plan

ND Planning

- Bi-annual state water plan
 - Listed project priorities
- WRDs developing a watershed plan (LiDAR, HMS Models)
 - Identify detention sites

ND Water Planning Process



- State Water Plan full review every 8+ years
 - Updated every 2 years for legislative session
- Starts at the local level
 - Locals provide a list of projects and programs
- Info collected used in budget development
- Focus is on future project/program funding needs
- •WRDs developing a watershed plan (LiDAR, Hydrology, Modeling)

Identify detention sites

MB Planning

- Conservation Districts
 - Watershed management plan
 - Receive \$25,000 from Province
 - Source water protection Focus
 - Covers other issues (flooding)
 - No LiDAR, no HMS or HEC/RAS models at this time

Lake Winnipeg







MN Watershed Districts Project Examples

- Streambank Restoration
- Aerial Environmental Surveys
- Flood Control Structures
- Natural Resources Inventories
- Nutrient Loading Reduction
- Public Education and Outreach
- Monitoring Studies
- Stormwater Management
- Dredging and Channel Excavation
- Farmstead Ringdikes

- Internship Programs
- Local Cost-Share Programs
- Erosion Control Projects
- Dam and Ditch Repair and

Assessment

- Stormwater Management
- Ditch Repair and Assessment
- Wetland Restoration
- Feedlot Pollution Reduction
- Agricultural Land Buffering
- Best Management Practices
- Hydrologic Model Development

ND Projects

- Detention projects short-term storage
- Retention projects
- Steambank erosion
- Riverbank stabilization
- Diversion
- Snagging/Clearing
- Drainage
- Bridges/Culverts

MB Projects

- Protect ground water supplies
- Reduce nutrient load runoff
- Manage both water and land resources
- Diversion province

MN Drainage Law

- Surface Drainage
 - County Commissioners
 - Joint county drainage authority
 - Watershed District
 - Transfer of jurisdictional authority from county to watershed district
 - Maintained locally, local assessment district
 - No state C/S
 - Ag drainage (10 yr event: 2-4 inches/24 hours)
- Tile Drainage
 - Permit for all sizes, from WD

ND Drainage Law

- Surface Water Drains
 - WRD originally formed as drain boards
 - Permits required: over 80 acres
 - C/S with SWC
 - Maintained locally, local assessment district
 - Ag drainage (10 yr event: 2-4 inches/24 hours)
- Tile Drainage
 - WRD permit (also reviewed at state)
 - Over 80 acres

MB Drainage

- Large Drains:
 - Provincially built and maintained
 - Provincial permit to use downstream impacts analyzed
- Smaller Drains:
 - Municipal (especially Rural Municipalities)
 - Local permits to access
 - Ag drainage (10 yr event: 2-4 inches/24 hours)
- Tile Drains:
 - Same regulations as surface
 - Permits needed to access surface system

North Ottawa Impoundment Project – Off Channel



Baldhill Dam- Multi-Purpose



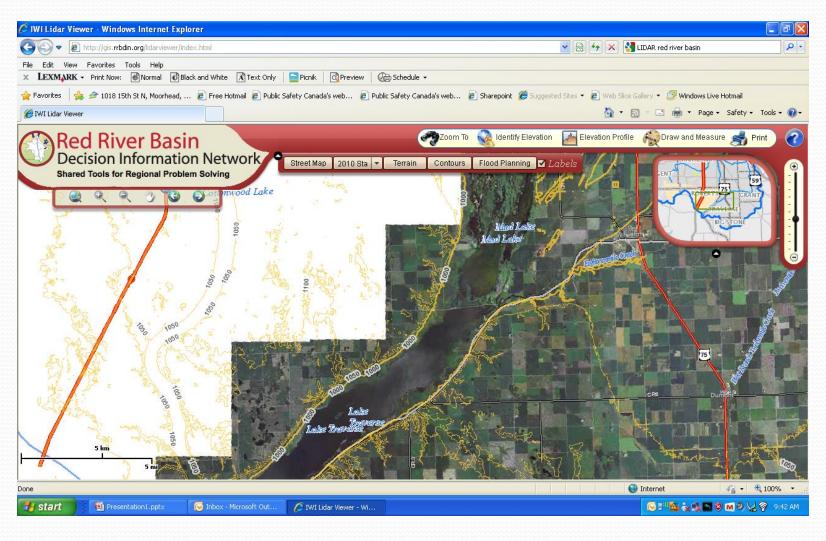
Maple River Dam



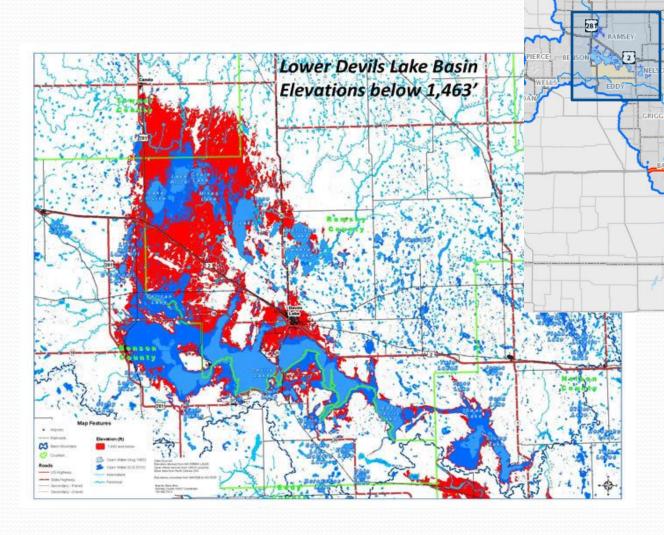
On Channel



Red River Mapping Initiative LiDAR



Devils Lake



Diversions/By Passes

- Fargo-Moorhead Diversion
- City of Winnipeg
- Portage Diversion
- Breckenridge/Wahpeton Diversion





Thank you!

- South Valley Initiative
 - MN, ND, SD
 - Next Meeting: September 18th ~ 6:00 p.m.
 - Hankinson Dakota Magic Casino



- Drainage Workshop Monday, January 13, 2014
- Questions?
- Contact Information:

Lance Yohe, Executive Director, RRBC 701-371-8246 lance@redriverbasincommission.org

For more information, please visit our website:

www.redriverbasincommission.org



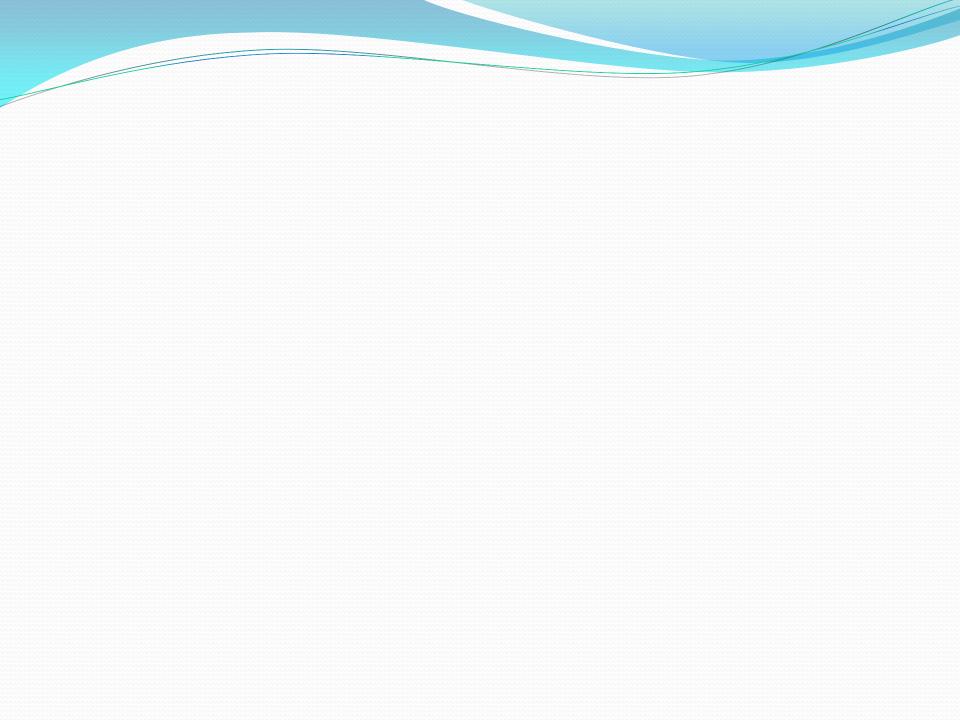


Figure 2: RRJWRD Organizational Structure

Member Water Resource Districts

Barnes County, Grand Forks County, Maple River, Nelson County, North Cass, Pembina County, Ransom County, Richland County, Rush River, Sargent County, Southeast Cass, Steele County, Traill County, Walsh County

RRJWRD Directors

Directors from 11 member counties

Executive Board

5 members from Board of Directors

Downstream Impacts Committee SWC Red River Engineer Basin Coordinator

Member watershed district costs which are eligible for RRWMB cost sharing include:

- concept development;
- 2. preliminary engineering studies;
- 3. environmental planning;
- 4. preparation of environmental review documents;
- 5. final engineering design;
- 6. preparation of construction plans and specifications;
- 7. construction engineering and administration;
- 8. right-of-way and easement acquisition;
- 9. construction costs;

MN Watershed Districts

- Tax/Assessment Levies (mill levies)
- Portion of mill levy is paid to RRWMB
- MN Watershed Districts report to BWSR and the Director of MN DNR Division of Waters

Water Resources Management Boards

- Water Resource Management Board
- In establishing water resource management districts, the legislature declared that the most efficient and economical method of managing, conserving, protecting, developing, and controlling water and related land resources is to establish water resource districts encompassing all of the geographic area of the state, and emphasizing hydrologic boundaries. Source: N.D.C.C. § 61-16.1-01.
- Most water resource districts are organized by county, but several are organized by watershed, e.g., Lower Heart, Willow Creek, and Rush River.

Red River Joint Water Resource District

 The Red River Joint Water Resource District is a joint board under North Dakota law comprised of 14 individual Water Resource Districts in the Red River Basin. The Red River Joint Water Resource District provides for a coordinated and cooperative approach to water management and provides critical funding to member districts for the purpose of developing and financing water retention projects.

WRD Activities

- Selected authorities of water resource management board
- Initiate legal action to compel an entity responsible for maintaining and repairing a bridge or culvert to remove all dirt, rocks, weeds, brush, shrubbery, other debris, and any artificial block which decreases the flow of water through the bridge or culvert. N.D.C.C. § 61-16.1-09(16)
- Coordinate proposals to install, modify, or construct culverts and bridges in an effort to achieve appropriate size and maximum consistency of road openings. The department of transportation, railroads, counties, and townships shall cooperate with the districts in this effort. N.D.C.C. § 61-16.1-09(21)
- Encourage landowners to retain water on the land to the maximum extent possible, and carry out the water management policy that upstream landowners and districts that have altered the hydrologic scheme share with downstream landowners the responsibility of managing and controlling surface waters. N.D.C.C. § 61-16.1-10(4)
- In planning any surface water project, address and consider the downstream impacts caused by the project. A determination of whether to proceed with the construction of a project shall be based on the following principles: a. Reasonable necessity of the project.

 b. Reasonable care to be taken to avoid unnecessary injury by fully considering all alternatives.

 c. Whether the benefit from the project reasonably outweighs the adverse impacts resulting from the project. N.D.C.C. § 61-16.1-10(5)
- Require that appropriate easements be obtained when projects will cause an adverse impact to lands of other landowners. N.D.C.C. § 61-16.1-10(6)

WRD

- Other statutes (N.D.C.C.) relating to operations of water resource districts
- § 61-16.1-41.1. Removal or placement of fill.
 - § 61-16.1-42. Drains along and across public roads and railroads.
 - § 61-16.1-43. Construction of bridges and culverts Costs.

 - § 61-16.1-44. Culvert and pipe arch bids and acceptance. § 61-16.1-45. Maintenance of drainage projects. § 61-16.1-46. Establishing new drains in location of invalid or abandoned drain.
 - § 61-16.1-47. Drain kept open and in repair by water resource board.
 - § 61-16.1-48. Assessment of costs of cleaning and repairing drains. § 61-16.1-49. Petition for a lateral drain Bond of petitioners.

 - § 61-16.1-50. Drains having a common outlet may be consolidated.
 - § 61-16.1-51. Removal of obstructions to drain Notice and hearing -Appeal - Injunction - Definition.

Local Planning

Watershed Plans

ND Funding

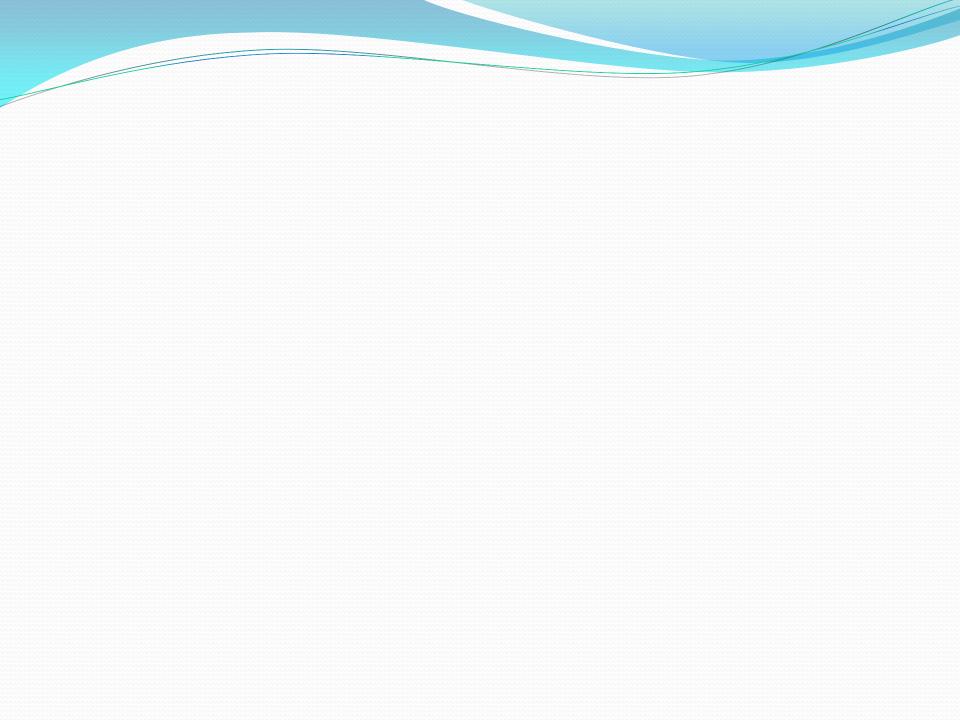
- Each watershed district pays a membership fee not to exceed 2 mils per state law.
- Local WRD mill levy limits

Manitoba

The Watershed Planning & Programs Section administers and manages the Conservation Districts Program as defined by <u>The Conservation Districts Act</u>, and coordinates and supports <u>Integrated Watershed Management Planning</u> (IWMP) as outlined in <u>The Water Protection Act</u>.

Conservation districts (CDs) are formed as a partnership between the province and local municipalities to protect, restore and manage land and water resources on a watershed basis. Conservation Districts are established under the authority of <u>The Conservation</u> <u>Districts Act</u>. Currently, there are 18 CDs in Manitoba, together they cover the majority of municipal Manitoba. All CDs are charged with developing and implementing programming to improve watershed health while four districts also have a mandate to maintain provincial waterways within their CD boundary.

Conservation districts can also be designated water planning authorities for integrated watershed management planning in Manitoba. They provide leadership in both the development and implementation of watershed plans. An IWMP assists a CD in planning long-term and short-term goals and identifying priority project to improve watershed health. Currently there are twenty three Integrated Watershed Management Plans in various stages of completion across the Province of Manitoba.



ND Water Coalition

- Coalition is *only* advisory
- Project sponsors and ND water interests
- Prioritize projects based on budget
- Coordinated legislative testimony
- Meet every 2-3 months

MN Structure

- MN Department of Natural Resources
 - Divisions: Ecological and Water Resources, Fish & Wildlife, Lands
 & Minerals, Enforcement, Forestry, Parks & Trails
 - Our mission is to work with citizens to conserve and manage the state's natural resources, to provide outdoor recreation opportunities, and to provide for commercial uses of natural resources in a way that creates a sustainable quality of life.
- MN Pollution Control Agency
 - Divisions: Industrial, Municipal, Remediation, Watershed, Environmental Analysis & Outcomes, Resource Management & Assistance, Operational Support
 - The Minnesota Pollution Control Agency's mission is to protect and improve the environment and enhance human health.

BWSR

- Board of Water & Soil Resources
- BWSR is the state soil and water conservation agency, and it administers programs that prevent sediment and nutrients from entering our lakes, rivers, and streams; enhance fish and wildlife habitat; and protect wetlands. The 20-member board consists of representatives of local and state government agencies and citizens.
- BWSR receives appropriations from the Clean Water, Land & Legacy Amendment to pay for on-the-ground conservation projects that provide multiple benefits for water quality and wildlife habitat.
- Connects local and state government

Drainage

ND Drainage

- A permit is needed before a landowner can drain a watershed of more than 80 acres.
- "Any person, before draining a pond, slough, lake, or sheetwater, or any series thereof, which has a watershed area comprising eighty acres [32.37 hectares] or more, shall first secure a permit to do so." North Dakota Century Code (N.D.C.C.) 61-32-03.
- For example, a permit is needed to drain a half-acre wetland in a 100-acre watershed. The criterion for determining whether a permit is required is not the size of the wetland or pond, but the size of the watershed in which the wetland is located.
- A permit is required whether the drainage involves constructing a ditch, pumping to remove the water, extending or modifying an existing drain, or filling a wetland. North Dakota Administrative Code (N.D.A.C.) § 89-02-01-03.
- A tiling drainage system also requires a permit. North Dakota Attorney General Letter Opinion, 2008-L-14.

- Some definitions (<u>N.D.A.C. § 89-02-01-02</u>)
- "Watershed" means the area which drains into a pond, slough, lake, or sheetwater, or any series thereof. Also see N.D.A.C. § 89-02-01-06
- "Pond" means a well-defined land depression or basin that holds water in normal years throughout the summer. Ponds generally go dry only in years of below normal runoff and precipitation.
- "Series of ponds, sloughs, lakes, or sheetwater" means two or more ponds, sloughs, lakes, or sheetwater that are hydrologically linked naturally or artificially.
- "Sheetwater" means shallow water that floods land not normally subject to standing water.
- "Slough" includes two types:
 - a. Seasonal slough: a depression which holds water in normal years from spring runoff until mid-July. In years of normal runoff and precipitation, a seasonal slough is usually not tilled but can be used for hayland or pasture. In low runoff, dry years, these areas generally are tilled for crop production, but commonly reflood with frequent or heavy summer or fall rains.
 - b. Temporary slough: a shallow depressional area that holds water or is waterlogged from spring runoff until early June. In years of normal runoff and precipitation, a temporary slough is usually tilled for crop production. In years of high runoff or heavy spring rain, a temporary slough may not dry out until mid-July and generally would not be tilled but may be used for hayland or pasture. A temporary slough frequently refloods during heavy summer and fall rains.

- Draining when a state permit is not needed
- No permit is needed if the watershed being drained is less than 80 acres. Instead, North Dakota applies a common law (legal concepts that have been defined by the courts through a series of lawsuits and decisions) doctrine of reasonable use. The primary consideration in the reasonable use doctrine is "what impact will the drainage have on downstream landowners."

- Defining "Reasonable Use"
- Excerpts from Martin v. Weckerly, 364 N.W.2d 93 (N.D. 1985) -- a North Dakota Supreme court decision in which the justices describe "reasonable use" as it applies to surface water drainage.
- "The reasonable-use concept is based upon the principle that although every landowner has the right to the use and enjoyment of his property, such use must be reasonable so as not to cause unnecessary injury to others.
- "Therefore, drainage of surface waters complies with the reasonable-use rule if: (a) There is a reasonable necessity for such drainage;
- (b) If reasonable care be taken to avoid unnecessary injury to the land receiving the burden;
- (c) If the utility or benefit accruing to the land drained reasonably outweighs the gravity of the harm resulting to the land receiving the burden; and
- (d) If, where practicable, it is accomplished by reasonably improving and aiding the normal and natural system of drainage according to its reasonable carrying capacity, or if, in the absence of a practicable natural drain, a reasonable and feasible artificial drainage system is adopted.

- "Consequently, the objective of the reasonable-use rule is to determine whether or not circumstances
 exist which will justify a court in shifting the loss from the person harmed (the downstream
 landowner) to the person causing the harm (the 'draining' landowner).
- "The reasonable necessity requirement must be considered in light of the policy established by the reasonable-use rule to equitably balance the developing and improving of land with any consequential harm to other property.
- "... Weckerly conducted no investigation concerning the impact his drainage would have on downstream landowners and that he otherwise took no significant action to avoid unnecessary harm to Hanson's property.
- "The trial court found Weckerly's drainage was the proximate cause of the damage to Hanson's property.
- "Weckerly asserts there was no proof that his improved drainage caused any abnormal runoff and that any high runoff was attributable to unseasonably high rainfall... Weckerly claims that drainage from other upstream landowners was responsible for the bulk of the runoff, and consequently the bulk of the drainage, to Hanson's property. We find Weckerly's argument unconvincing. Weckerly voluntarily consented to the drainage of water onto his land by upstream landowners. It was, or should have been, reasonably foreseeable to Weckerly that the commingling and subsequent drainage of his surface water with that of upstream landowners could cause harm to Hanson's property.
- "The law should not inhibit reasonable development and improvement of land, but neither should it allow a landowner to expel surface water without regard to the consequences."
- Also "maintaining a (natural) drainway in its natural state does not require a drainage permit." See Nilson v. Markestad, 353 N.W.2d 312, 314 (N.D. 1984)." Ness v. Ward County Water Resource Dist., 1998 ND 191, 585 N.W.2d 793 (http://www.court.state.nd.us/_court/opinions/980072.htm)

- Draining when a state permit is needed
- The general rule is that a permit is required before draining a watershed of more than 80 acres. The process of obtaining a drainage permit is collaboratively administered by the state engineer and local water resource management boards.

- Factors to be considered
- volume of water to be drained and its impact on the receiving wartercourse
- possible adverse effects on downstream lands
- design of drain
- impact on flooding in the watershed
- impact on waterbodies with recognized fish and wildlife values
- impact on agricultural lands
- whether (flowage?) easements are required

- Observation -- The focus of the criteria is on minimizing the adverse impact to downstream landowners (which is consistent with the common law reasonable use doctrine). Preservation of wetlands is not the primary statutory criterion in determining whether a drainage permit should be granted. Exception -- the project's impact on waterbodies with recognized fish and wildlife values.
- If the investigation shows that the proposed drainage will flood or adversely affect lands of downstream landowners, the water resource board may not issue a permit until flowage easements are obtained. The flowage easements must be filed for record in the office of the recorder of the county or counties in which the lands are situated.

 N.D.C.C. §61-32-03
- "The obvious purpose of requiring a flowage easement is to protect downstream landowners and insure that they receive just compensation in the event of flooding or an adverse impact on their land." <u>Larson v. Wells County Water Resource Board, 385 N.W.2d 480</u> (N.D. 1986) (http://www.court.state.nd.us/_court/opinions/11035.htm)

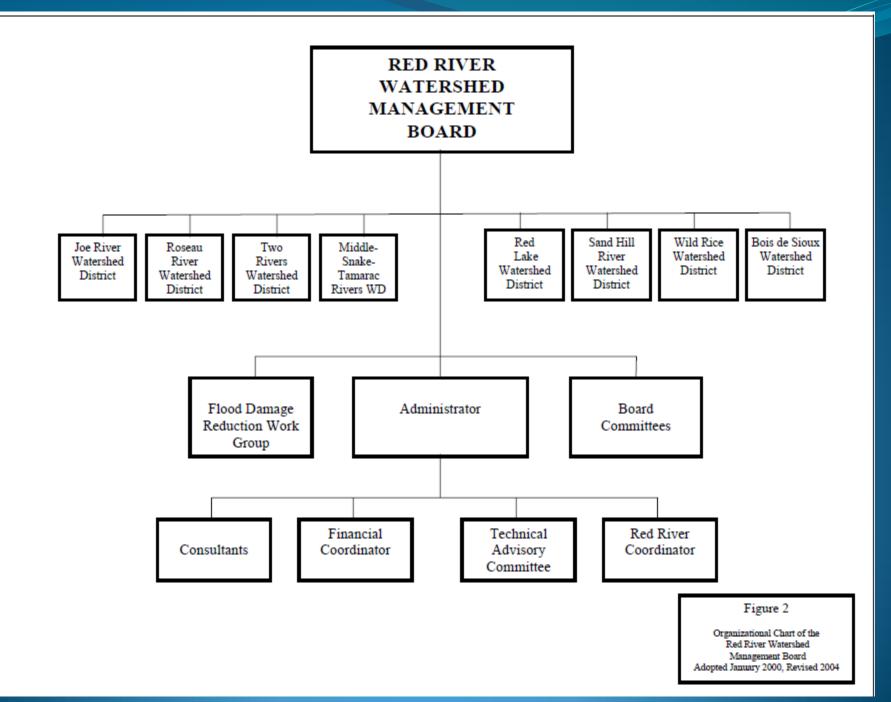


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Projects